Amendments to the Claims:

Without prejudice, please amend the claims as below. This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-50. Cancelled.

51. (Currently amended) A computer-implemented process for producing a trace file for use in Nuclear Magnetic Resonance (NMR) spectrum analysis, the method comprising:

performing a Fourier Transform on Free Induction Decay (FID) data to produce an initial spectrum;

filtering a selected region of said initial spectrum to produce a filtered spectrum; ~~and~~

phasing said filtered spectrum to produce a measured spectrum having a flat baseline and well defined positive peaks; and

storing said measured spectrum as said trace file for use in said spectrum analysis.

52. (Currently amended) The method of claim 51 wherein said initial spectrum includes at least one peak associated with a contaminant and wherein filtering comprises applying a notch filter to said selected region to suppress ~~a~~ said at least one peak associated with ~~a~~ said contaminant, in said ~~contaminant~~ selected region.

53. (Currently amended) The method of claim 52 wherein applying a notch filter comprises producing ~~an adjusted~~ a set of notch filter parameters and using said notch filter parameters to control said notch filter to cause said notch filter to filter ~~applying a notch filter employing said adjusted set of notch filter parameters to~~ said selected region.

54. (Currently amended) The method of claim 53 wherein ~~applying a~~ causing said notch filter to filter said selected region comprises iteratively adjusting said set of notch filter parameters ~~and applying said adjusted notch filter parameters to a notch filter~~ and iteratively applying said notch filter to said selected region until a sum of ~~the~~ absolute values of areas defined by peaks above and below a baseline of said initial spectrum is minimized.

55. (Original) The method of claim 51 wherein phasing said adjusted spectrum comprises adjusting real and imaginary components of said filtered spectrum until said filtered spectrum has all positive, well defined peaks.

56. (Currently amended) The method of claim 51 wherein performing ~~a~~ said Fourier transform comprises performing a weighted Fourier Transform with weights that provide for enhancement of said initial spectrum.

57. (Currently amended) The method of claim 56 wherein performing ~~a~~ said weighted Fourier Transform comprises employing weights that perform a line broadening function to said initial spectrum.

58. (Original) The method of claim 51 further comprising defining the size of a window on said initial spectrum.

59. (Currently amended) The method of claim 58 wherein defining the size of ~~a~~ said window comprises scaling said initial spectrum.

60. (Original) The method of claim 51 further comprising correcting said initial spectrum for drift effects.

61. (Original) The method of claim 51 further comprising performing baseline correction on said measured spectrum.

62. (Currently amended) A computer readable medium for providing codes operable to direct a processor circuit to produce a trace file for use in Nuclear Magnetic Resonance (NMR) spectrum analysis, the computer readable medium comprising:

codes for automatically causing the processor circuit to perform a Fourier Transform on Free Induction Decay (FID) data to produce an initial spectrum;

codes for automatically causing the processor circuit to filter a selected region of said initial spectrum to produce a filtered spectrum; and

codes for automatically causing the processor circuit to phase said filtered spectrum to produce a measured spectrum having a flat baseline and well defined positive peaks;

codes for causing the processor circuit to store said measured spectrum for use in said spectrum analysis.

63. (Withdrawn) An apparatus for producing a trace file for use in spectrum analysis, the apparatus comprising:

means for automatically performing a Fourier Transform on Free Induction Decay (FID) data to produce an initial spectrum;

means for automatically filtering a selected region of said initial spectrum to produce a filtered spectrum; and

means for automatically phasing said filtered spectrum to produce a measured spectrum having a flat baseline and well defined positive peaks.

64. (Withdrawn) A signal for causing a processor circuit to produce a trace file for use in spectrum analysis, the signal including:

a first segment comprising codes for automatically causing said processor circuit to perform a Fourier Transform on Free Induction Decay (FID) date to produce an initial spectrum;

a second segment comprising codes for automatically causing the processor circuit to filter a selected region of said initial spectrum to produce a filtered spectrum; and

a third segment comprising codes for automatically causing the processor circuit to phase said filtered spectrum to produce a measured spectrum having a flat baseline and well defined positive peaks.

65-77. Cancelled.